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ABSTRACT

Information is presented on existing retraining programs for women in chemistry, listed alphabetically by state. Data are included on a few institutions that do not have special programs in chemistry but do stress retraining for women. Included are 11 colleges and universities, with a brief description of the program offered, information on scheduling, costs, residence requirements, financial aid, and provision for part time as well as full time study, and sources for further information. (EB)

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AMERICAN CHEMICAL SOCIETY

WOMEN'S SERVICE COMMITTEE

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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RETRAINING PROGRAMS FOR WOMEN CHEMISTS

How to remain professionally up-to-date is not a new problem nor is it restricted to the science of chemistry. However, the rapidly increasing developments in chemistry and chemical engineering exaggerate the situation considerably. It's a fact that chemists who completed their undergraduate education five or more years ago and who have not worked continuously in the field since that time find their knowledge and skills approaching obsolescence. It is almost impossible for them to return to the profession of chemistry and utilize to the fullest their talents and capabilities.

Women chemists, who often leave employment for extended periods of time to rear a family or for other family obligations, are in an especially vulnerable position for losing professional competence. As many of them re-enter the labor force, they find their skills rusty and their theoretical knowledge less than satisfactory--if, in fact, they are able to obtain jobs in the field of chemistry at all. This is a great loss not only to the women but to the profession itself.

In order for these women to successfully function as chemists, they usually need some degree of retraining. Many women realize this and attempt to pursue graduate studies full-time before re-entering the labor force. However, others are unable to enroll in full-time graduate work. In both instances, women often find that regular university programs are not responsive to their particular needs. Two of the major problems are course content, which initially may be too advanced, and lack of financial aid possibilities. Although support sometimes can be obtained for full-time graduate work, it is usually unavailable for part-time study.

Many colleges and universities are aware of the special problems of women chemists and have established retraining programs to help bring them up-to-date. The Women's Service Committee of the American Chemical Society surveyed college and university chemistry departments throughout the country that offer a graduate degree to determine the extent and nature of any existing retraining programs. More than 50 percent of the 363 departments responded to the survey but only 11 of these indicated they have special programs or make any special provisions for women who wish to be retrained after being away from the field of chemistry for a number of years.

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This report, a result of the survey, is intended for two main audiences: first, women chemists themselves who have a need for such programs; and second, college and university chemistry departments who should be aware of what other institutions are doing in this area. The report does not profess to be all-inclusive but it does provide a picture of existing retraining opportunities in chemistry.

Persons interested in a more extensive report on continuing education possibilities for women in all fields, including a listing of state and university counseling services, should consult Continuing Education Programs and Services for Women, Pamphlet 10 of the U. S. Department of Labor. Copies can be obtained for 40 cents each from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402.

Chemistry departments responding to the survey reflected a variety of attitudes toward retraining programs for women chemists. Many institutions said they placed these women in regular graduate programs with some review of undergraduate work - a few providing special guidance for these women. Other departments indicated that because of the population distribution in their locality, there was no demand or need for such a program. A couple of departments felt that this type of retraining is the proper task of industry, not the university. Many departments that do not have a retraining program of any type expressed a willingness to consider establishing such a program if the demand warranted it and if they were given some concrete ideas on how to proceed.

Women interested in being retrained in chemistry are urged to contact the chemistry department or dean of admissions at local universities to see what opportunities are available. Many institutions, although not having retraining programs as such, permit students to audit all or parts of a number of undergraduate courses to update their training and prepare them for regular work and others especially assist women to plan their graduate programs when they have been away from academic life for a period of time.

Also, many institutions have special programs for secondary school chemistry teachers. These courses of study range from National Science Foundation-sponsored in-service institutes to master's degree programs. Although courses in these programs are primarily designed for teachers, many of them are adaptable for retraining purposes and are open to persons other than teachers, on a tuition basis.

Some possibilities for retraining do exist in industries and women chemists might do well to see if any industry in their area has some type of program that would provide the necessary retraining in addition to a job.

Another possibility for retraining or updating existing knowledge in a particular area of chemistry is the American Chemical Society Short Course program. Although many of the courses are highly technical in nature, some of them are designed for persons with a limited background in that phase of study and could prove valuable as a tool for retraining. Information about these courses can be obtained from the ACS Short

Course office, 1155-16th Street, N. W., Washington, D. C. 20036. Many industrial organizations and ACS local sections also sponsor short courses.

Following is information on existing retraining programs for women in chemistry--presented alphabetically by state for the convenience of the reader. Data is included on a couple of institutions that do not have special programs in chemistry but do stress retraining for women and wished to be included in the report.

INFORMATION ON RETRAINING PORGRAMS FOR WOMEN IN CHEMISTRY

CALIFORNIA

Claremont Colleges

Center for Continuing Education. Provides free of charge - except fees for special tests - counseling for educational planning and referral for course work offered in the Claremont Colleges.

For further information, contact: Mrs. Elizabeth Cless, Director of the Center for Continuing Education, Harper Hall 160, Claremont, California 91711.

DELAWARE

University of Delaware

Provides special advisor to consult with women who wish to continue their education at any level. University has large extension division program (courses given at night and on Saturdays) of regular undergraduate or graduate courses which can be used to help bring persons up-to-date. Two courses especially suitable for retraining are Basic Concepts of Chemistry and Introduction to Biophysical Chemistry. For further information, contact: Dr. Elizabeth Dyer, Professor of Chemistry, Department of Chemistry, University of Delaware, Newark, Delaware 19711.

ILLINOIS

Lake Forest College

Offers independent study program leading to an undergraduate degree or providing an updating of knowledge of persons already possessing a degree. Students spend one day a week on campus in tutorial sessions with a faculty member, discussing the work of the preceding week and receiving the assignments to complete the following week. No advanced degree possible. Cost per term for one tutorial session per week is $200.00. For further information, contact: William L. Dunn, Dean of the Faculty, Lake Forest College, Lake Forest, Illinois 60045.

Northern Illinois University

Provides no formal program as such but does have extremely flexible undergraduate and graduate programs. University "Student-at-large" policy permits persons over 25 years of age

to "sample" courses as needed without having to go through regular admission procedures or adhere to a prescribed degree program.
For further information, contact: Dean of Admissions, Northern Illinois University, Dekalb, Illinois 60115.

KANSAS

Kansas State University

Encourages persons who have been away from chemistry for a number of years to enter graduate study. Department gradually works them into a full-time graduate program as regular students. For further information, contact: Adrian H. Daane, Head of the Department of Chemistry, Kansas State University, Manhattan, Kansas 66502.

MASSACHUSETTS

Radcliffe College

The Radcliffe Institute. Offers fellowships to women engaged in part-time graduate study in any field in colleges and universities in Connecticut, Massachusetts, and Rhode Island. These fellowships are not available for post-doctoral study, for research or graduate study not related to a degree, or for study abroad. Grants are tailored to meet individual needs but usually do not exceed $2,000. Expenses which can be covered by the fellowship include tuition, books, baby-sitting, and household costs, transportation, and any other costs entailed in freeing the applicant's time for part-time study. For further information, contact: The Radcliffe Institute, Part-time Graduate Fellowship Program, 3 James Street, Cambridge, Massachusetts 02138.

Wellesley College

Institute in Chemistry. Provides half-time graduate study for two years leading to the Master of Arts degree in Chemistry. Supported by the National Science Foundation, it is designed for women who finished their undergraduate education five or more years ago to prepare them to return to work in chemistry. Courses of study are individually planned for each participant but include five units of course work the first year and course work and laboratory teaching experience the second year. Participants are exempt from all tuition and fees, in addition to receiving a book allowance of $75 and being eligible for tax-free stipends of up to $1,500 based on need) for each academic year to assist them in meeting some of the expenses of graduate study, including child care, cost of transportation, and additional books or supplies.

For further information, contact: Dr. Eleanor R. Webster, Associate Professor in Chemistry, Wellesley College, Wellesley, Massachusetts 02181.

MICHIGAN

University of Michigan

Center for Continuing Education of Women. Provides general counseling for planning an educational program, information on financial aid, and assistance in arranging aid when possible. Students continue their education in the regualr undergraduate or graduate programs of the University. For further information contact: Mrs. Jean W. Campbell, Director, Center for Continuing Education of Women, 330 Thompson Street, Ann Arbor, Michigan 48108.

NEW JERSEY

Fairleigh Dickinson University

Master of Arts in Science program. Primarily designed for secondary school science teachers but also used by persons wishing to return to chemistry after an absence. Basic courses are available in chemistry, physics, and biology, as well as more advanced courses stressing inorganic, structural organic, physical and biochemistry, and modern instrumental techniques. Secondary school teachers may be supported by the National Science Foundation; other participants may enroll on a tuition basis. For further information, contact: Dr. Harold Weinberger, Chairman, Department of Chemistry, Fairleigh Dickinson University, Teaneck, New Jersey 07666.

NEW YORK

The Herbert H. Lehman College (formerly Bronx Campus of Hunter College) of the City University of New York.

Master of Science in Chemistry program. Designed to update the training of baccalaureate chemists working in industry or research institutes as well as to fill the needs of women reentering the field. Requirements for the degree include a minimum of 30 graduate credits. For further information, contact: Mary Jane Kingkade, Associate Dean of the Faculties, Herbert H. Lehman College, Bedford Park Boulevard West, Bronx, New York 10468.

PENNSYLVANIA

Cedar Crest College

PORTAL - Program of Return to Advance Learning. Open to mature area men and women who wish to complete college degrees or to those who wish to bolster their past degree training. Intended

for persons who have had their education interrupted for either brief or extended periods of time. An opportunity for independent study is included for those with special qualifications and interests. Partial-tuition scholarships are available for those persons taking two or more courses con-currently. For further information, contact: Miss Mary Rose McWilliams, Director of Admissions, Cedar Crest College, Allentown, Pennsylvania 18104.

Report prepared by
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The Women's Service Committee would be grateful to hear of similar training programs not included in this report. Other comments and suggestions on the report would also be most welcome. Please address correspondence to: ACS Women's Service Committee, 1155-16th Street, N. W., Washington, D. C. 20036

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